

Claims

1. A toughened polyoxymethylene resin composition, comprising (a) 100 parts by weight of a polyoxymethylene resin, (b) 5-60 parts by weight of a polyether-ester block copolymer derived from copolymerization of a hard
5 segment including a dicarboxylic acid component and a glycol component and a soft segment including a poly(tetramethylene oxide)terephthalate unit, and (c) 0.1-10 parts by weight of a modified polyethylene polymer, with a dot impact strength not less than 5 J, an Izod notch impact strength not less than 10 kg-cm/cm, and a tensile strength not less than 550 kg/cm², wherein the resin has a
10 dispersion phase amounting to 2 to 5 μ m when a molded article of the composition is broken at low temperatures.
2. The composition as defined in claim 1, wherein the dicarboxylic acid component comprises terephthalic acid alone, or a mixture of terephthalic acid and any one of aromatic dicarboxylic acid and alicyclic dicarboxylic acid.
- 15 3. The composition as defined in claim 1, wherein the dicarboxylic acid component comprises a mixture of 70 wt% or more of terephthalic acid and 30 wt% or less of any one selected from the group consisting of aromatic dicarboxylic acid, alicyclic dicarboxylic acid, and mixtures thereof.
- 20 4. The composition as defined in claim 2 or 3, wherein the aromatic dicarboxylic acid is selected from the group consisting of isophthalic acid, phthalic acid, naphthalene-2,6-dicarboxylic acid, diphenyl-4,4'-dicarboxylic acid, 3-sulfoneisophthalic acid, and mixtures thereof.
- 25 5. The composition as defined in claim 2 or 3, wherein the alicyclic dicarboxylic acid is selected from the group consisting of oxalic acid, succinic acid, adipic acid, azellic acid, sebacic acid, dodecanoic acid, dimer acid, and

mixtures thereof.

5 6. The composition as defined in claim 1, wherein the glycol component comprises 1,4-butanediol alone, or 50 wt% or more of 1,4-butanediol and 50 wt% or less of a copolymerizable component selected from the group consisting of ethyleneglycol, diethyleneglycol, propyleneglycol, 1,6-hexanediol, 1,10-decanediol, 1,4-dihydroxymethyl cyclohexane, bis(4-hydroxyethoxyphenyl)methane, neopentylglycol, and mixtures thereof.

10 7. The composition as defined in claim 1, wherein the soft segment comprises poly(tetramethylene oxide)glycol constituting the poly(tetramethylene oxide)terephthalate unit.

8. The composition as defined in claim 7, wherein the poly(tetramethylene oxide)glycol has a number average molecular weight of 500-20,000.

15 9. The composition as defined in claim 7 or 8, wherein the poly(tetramethylene oxide)carboxylate unit is used in an amount of 30 to 80 parts by weight.